Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.-33. (Canceled)

34. (Currently amended) A detector assembly for detecting the presence of a molecule in an analyte comprising:

an analyte carrier having a conducting surface for receipt of an analyte in an analysis region of the surface;

a first laser radiation source arranged to provide radiation directed, in use, to the analysis region to cause Raman scattering;

a first sensor arranged to detect radiation from the first laser radiation source that has been scattered from the analysis region by Raman scattering to detect the presence of the molecule;

a second laser radiation source arranged to provide radiation, in use, to the conducting surface at an angle to the conducting surface such that a field is generated in the analysis region;

wherein the first and second laser radiation sources and the conducting surface and wavelength of the second radiation source are arranged such that the field generated by the second laser source matches a ~~band gap of the Raman scattering~~<u>molecular vibrational energy state</u> and thereby causes an enhanced Raman scattering effect of radiation of the first laser source.

35. (Previously presented) A detector assembly according to claim 34, wherein the conducting surface comprises a colloidal metal film.

36. (Previously presented) A detector assembly according to claim 34, wherein the metal film is one of aluminium, copper, silver or gold.

37. (Previously presented) A detector assembly according to any one of claims 34-36, wherein the conducting surface has a thickness of the order 10-100nm.

38. (Previously presented) A detector assembly according to any one of claims 34-36, wherein the conducting surface has deposited thereon a reporter dye having a binding molecule for selectively binding to an analyte molecule to be analyzed.

39. (Previously presented) A detector assembly according to claim 38 wherein the reporter dye is arranged so that, in use, the reporter dye is in the analysis region on binding with a molecule to be analyzed.

40. (Previously presented) A detector assembly according to any one of claims 34-36, wherein the analyte carrier comprises a microfluidic chip.

41. (Previously presented) A detector assembly according to claim 40, wherein the microfluidic chip includes at least one channel, a portion of the channel having the conducting surface thereon.

42. (Previously presented) A detector assembly according to claim 40, wherein the microfluidic chip includes multiple channels, each channel having a portion with a conducting surface thereon, each conducting surface having a different reporter dye deposited thereon.

43. (Previously presented) A detector assembly according to any one of claims 34-36, wherein the carrier comprises a microtiter plate.

44. (Previously presented) A detector assembly according to claim 43, wherein the microtiter plate has one or more wells, each well having the conducting surface at a bottom portion thereof.

45. (Previously presented) A detector assembly according to any one of claims 34-36, wherein the carrier comprises a prism arrangement, the conducting surface being arranged on one face of the prism.

46. (Previously presented) A detector assembly according to any one of claims 34-36, wherein the second laser radiation source is arranged to provide plane-polarised radiation to the conducting surface.

47. (Previously presented) A detector assembly according to claim 46, wherein the second laser radiation source is arranged to provide radiation at or near the critical angle to the conducting surface.

48. (Previously presented) A detector assembly according to any one of claims 34-36, wherein the conducting surface has surface plasmons of a surface plasmon wavelength, and the second laser radiation source is arranged to provide radiation at substantially the surface plasmon wavelength.

49. (Currently amended) A detector assembly according to claim 47, wherein the second laser source is arranged for surface plasmon resonance detection, the detector ~~assembling~~ assembly further comprising a second sensor arranged to detect~~ed~~ radiation from the ~~first~~ second laser light source refracted from the surface.

50. (Previously presented) A detector assembly according to claim 49, wherein the second sensor comprises a single sensor arranged to detect a change in intensity of the refracted radiation to detect the presence of the molecule.

51. (Previously presented) A detector assembly according to claim 49, wherein the sensor comprises an array of sensors arranged to detect a change in angle of the refracted radiation to detect the presence of the molecule.

52. (Currently amended) An analyte carrier for use in a detector assembly in which laser radiation from a first source is used to detect the presence of an analyte by Raman scattering, and laser radiation from a second laser radiation source is used to generate a field to match a vibrational molecular energy state and enhance the Raman scattering, comprising:

- a substrate for supporting the analyte and having optical properties chosen to match the laser radiation from the first or second radiation sources; and
- a conducting surface on a portion of the substrate for receipt of the analyte.

53. (Previously presented) An analyte carrier according to claim 52, wherein the conducting surface comprises a colloidal metal film.

54. (Previously presented) An analyte carrier according to claim 53, wherein the metal film is one of aluminium, copper, silver or gold.

55. (Previously presented) An analyte carrier according to claim 52, wherein the conducting surface has a thickness of the order 10-100nm.

56. (Previously presented) An analyte carrier according to claim 52, wherein the conducting surface has deposited thereon a reporter dye having a binding molecule for selectively binding to an analyte molecule to be analyzed.

57. (Previously presented) An analyte carrier according to claim 56, wherein the reporter dye is arranged so that, in use, the reporter dye is in the analysis region on binding with a molecule to be analyzed.

58. (Previously presented) An analyte carrier according to claim 52, wherein the analyte carrier comprises a microfluidic chip.

59. (Previously presented) An analyte carrier according to claim 58, wherein the microfluidic chip includes at least one channel, a portion of the channel having the conducting surface thereon.

60. (Previously presented) An analyte carrier according to claim 58, wherein the microfluidic chip includes multiple channels, each channel having a portion with a conducting surface thereon, each conducting surface having a different reporter dye deposited thereon.

61. (Previously presented) An analyte carrier according to any one of claims 53 to 58, wherein the carrier comprises a microtiter plate.

62. (Previously presented) An analyte carrier according to claim 61, wherein the microtiter plate has one or more wells, each well having the conducting surface at a bottom portion thereof.

63. (Previously presented) An analyte carrier according to any one of claims 52 to 57, wherein the carrier comprises a prism arrangement, the conducting surface being arranged on one face of the prism.

64. (Currently amended) A detector for detecting the presence of a molecule in an analyte on an analyte carrier having a conducting surface for receipt of an analyte in an analysis region of the surface, comprising:

a first laser radiation source arranged to provide radiation directed, in use, to the analysis region to cause Raman scattering;

a first sensor arranged to detect radiation from the first laser radiation source that has been scattered from the analysis region ~~by Raman scattered from the analysis region~~ by Raman scattering to detect the presence of the molecule;

a second laser radiation source arranged to provide radiation, in use, to the conducting surface at an angle to the conducting surface such that a field is generated in the analysis region;

wherein the first and second laser radiation sources and the conducting surface and wavelength of the second radiation source are arranged such that the field generated by the second laser source matches a ~~band gap of the Raman scattering~~molecular vibrational energy state and thereby causes an enhanced Raman scattering effect of radiation of the first laser source.

65. (Currently amended) A method of detecting the presence of a molecule in an analyte, comprising:

- providing the analyte on an analysis region of a conducting surface;
- illuminating the analysis region with first laser radiation to cause Raman scattering;
- detecting radiation scattered from the analysis region by Raman scattering to detect the presence of the molecule;
- simultaneously illuminating the conducting surface with second laser radiation at an angle to the conducting surface and wavelength such that the field generated by the second laser source matches a ~~band gap of the Raman scattering~~molecular vibrational energy state to generate a field in the analysis region; and
- wherein the field generated in the analysis region enhances the Raman scattering effect.